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(71) Applicant(s)

Reckitt & Colman Inc

(Incorporated in USA - Delaware)

One Philips Parkway, Montvale, New Jersey 07645,
United States of America

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(74) Agent and/or Address for Service

N P Sanderson

Reckitt & Colman Plc, Group Patents Department,
Dansom Lane, HULL, HU8 7DS, United Kingdom

(72) Inventor(s)

Josephine Telesca

(54) Cleaning implement

(57) A cleaning implement for removing stains comprises a roll 1 of absorbent material and means including a handle 9 and means 8 for rotatably supporting said roll. The absorbent material may be polyester and may be perforated at intervals 5 into removable sheets 4 such that a soiled top sheet may be torn away to expose an unused sheet. The roll may comprise a core 2 with the absorbent material 3 secured to and rolled around said core. The roll may be replaceable. The implement may form part of a kit which also includes a cleaning composition such as a dry cleaning solution (figure 3). In use the implement may be rolled over a stain that has had cleaning composition applied to loosen the stain in order that the implement may absorb the stain and excess cleaning composition. The absorbent material may also be provided on a roll without a support or handle (figure 1).

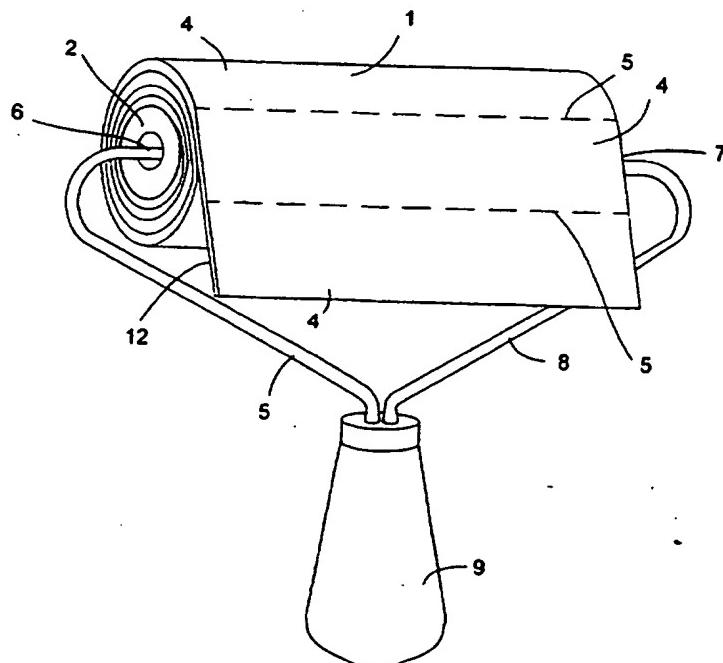


Fig. 4

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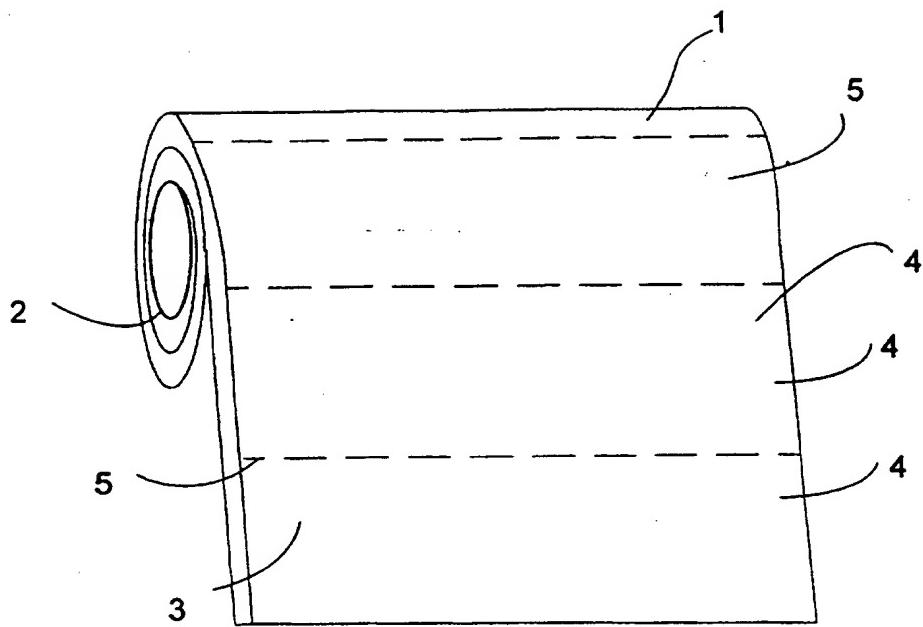


Fig. 1

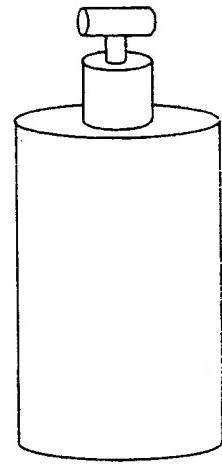


Fig. 3

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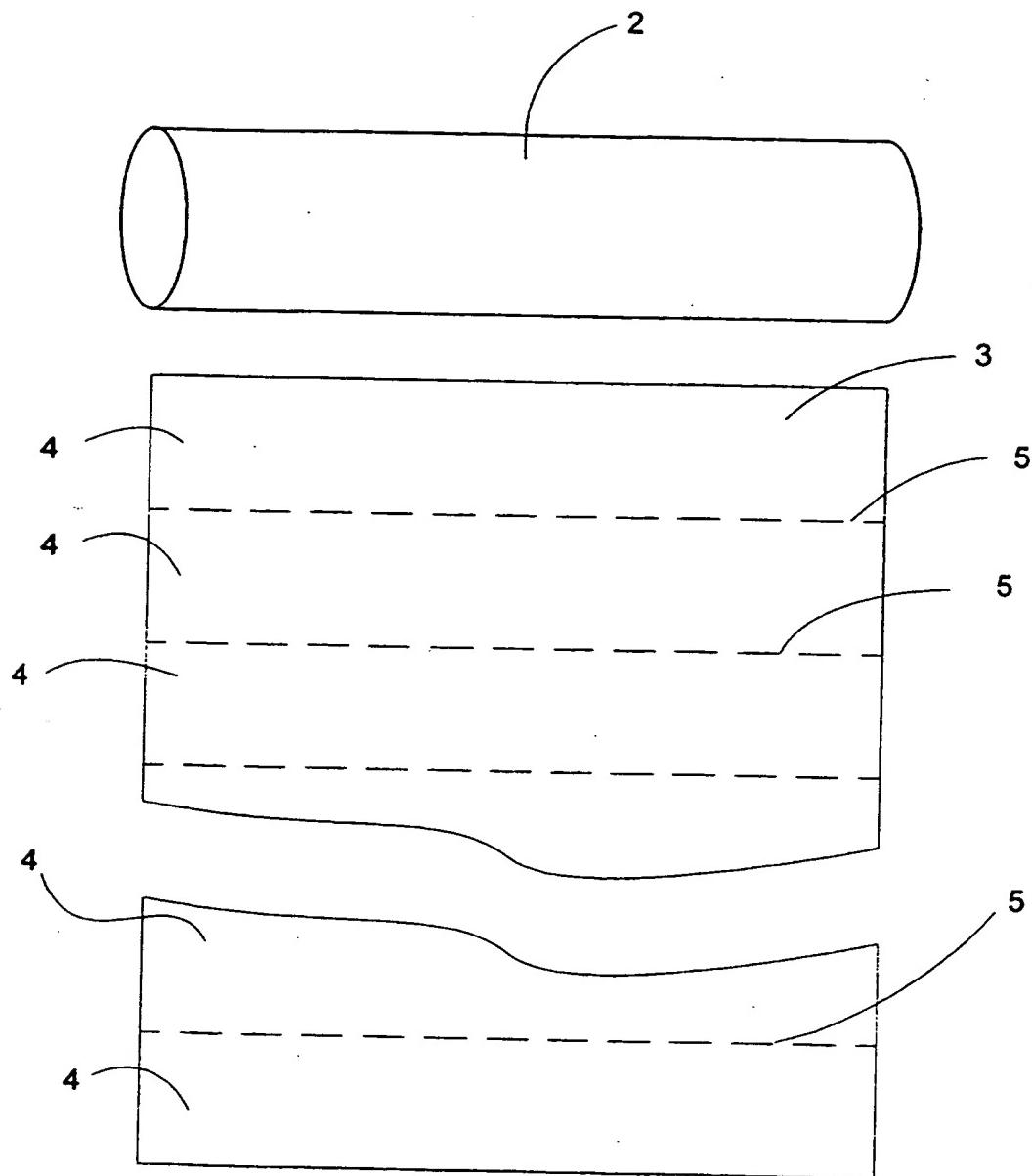


Fig. 2

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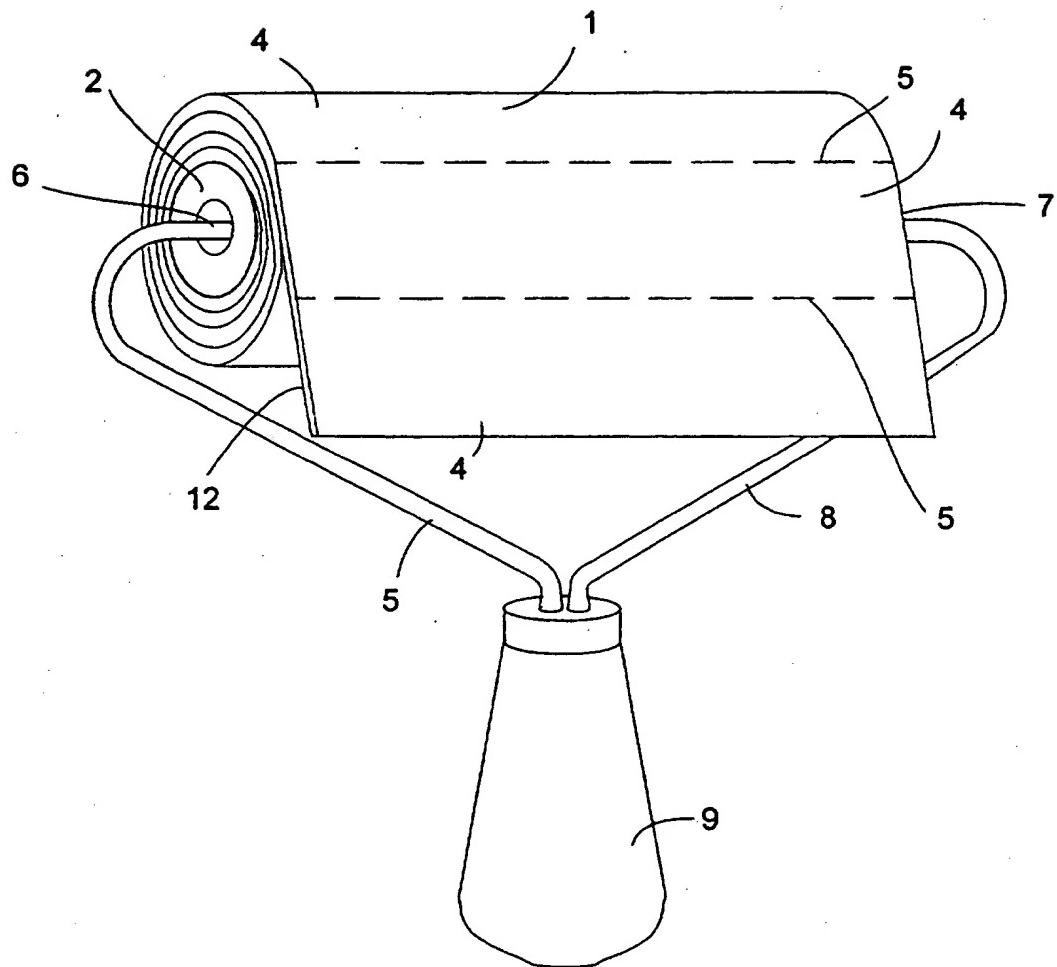


Fig. 4

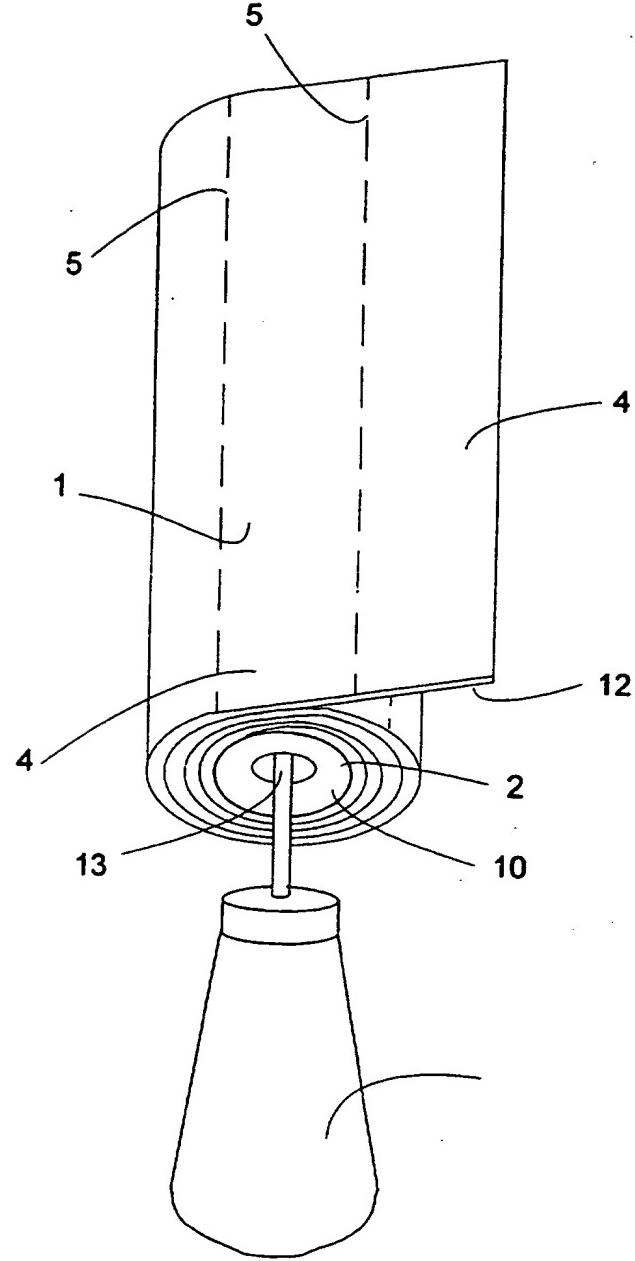


Fig. 5

**A ROLL OF ABSORBING PADS AND STAIN REMOVING IMPLEMENT
AND METHODS FOR THEIR USE**

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This invention generally relates to stain removal from garments, and more particularly to absorbent pads and implements particularly useful for stain removal.

Various pads, devices and implements which find use in the treatment and removal of stains are known to the art. For example, such include those disclosed in U.S. Patent No. 10 3,520,016 issued July 14, 1970; U.S. Patent No. 3,761,991, issued October 2, 1973; U.S. Patent No. 4,905,337, issued March 6, 1990; U.S. Patent No. 2,693,610, issued November 9, 1954; U.S. Patent No. 4,594,362, issued June 10, 1986; and U.S. Patent No. 4,685,930, issued August 11, 1987.

15 It is a general object of the invention to provide a stain removing implement for use at home, which is simple and inexpensive to use.

It is another object of the invention to provide a roll of absorbent pads for removing stains.

These and other objects of the invention are accomplished by providing a stain removing 20 implement comprising; a stain removing roll of absorbent material; and, means for rotatably supporting said roll so that the roll can be rolled over a garment during stain removal, the supporting means including a handle.

In one embodiment of the invention, there is provided a stain removing kit comprising a quantity of cleaning composition; and a stain removing implement comprising; a roll of absorbent 25 material; and means rotatably supporting the roll so that the roll can be rolled over a garment during the stain removal, the supporting means including a handle.

In another embodiment of the invention there is provided a method of stain removal comprising the steps of: applying cleaning composition to a stained area of the garment to dissolve and mobilize soil; rolling a stain removing implement over the stained area to absorb the 30 soil and remaining cleaning composition; the stain removing implement comprising: a roll of absorbent material; and means rotatably supporting the roll so that the roll can be rolled over a garment during stain removal, the supporting means including a handle.

In still a further embodiment of the invention, a stain removing kit comprises a quantity of cleaning composition; and a roll of absorbent pads for removing stains from garments comprising: a core; a length of absorbent fabric secured at one end of the core and rolled onto the core; wherein the absorbent fabric is perforated at intervals of length into removable pads.

5 Additionally, there is provided a method of stain removal comprising the steps of: tearing an absorbent pad of a size larger than a stain to be removed from a roll of absorbent pads; positioning the absorbent pad on a flat surface; applying cleaning composition directly on the stain to be removed; positioning the stain on a garment faced down on the absorbent pad; and applying pressure on the back of the garment over the stain so that the absorbent pad absorbs the 10 soil and excess cleaning composition.

The above and other objects, aspects, features and advantages of the invention would be more readily apparent from the description of the preferred embodiments taken in conjunction with the accompanying drawings and appended claims.

15 The invention is illustrated by way of example and not limitation in the figures of the accompanying drawings in which like references denote like and corresponding parts and in which:

Figure 1 is a schematic drawing of a stain removing roll of absorbent material employed in the stain removing implement in accordance with the invention;

20 Figure 2 is an exploded view of the stain removing roll in accordance with the present invention showing a core and a length of absorbent material;

Figure 3 is a schematic drawing of a bottle containing a quantity of cleaning composition for use in the stain removing kit in accordance with the present invention;

Figure 4 is a schematic drawing of a first embodiment of the stain removing implement in accordance with the present invention; and

25 Figure 5 is a schematic drawing of a second embodiment of the stain removing implement in accordance with the present invention.

In accordance with one aspect of the invention there is provided a stain remover which may be used alone or as a pre-treatment before conventional cleaning, or light cleaning or freshening in a home dryer dry cleaning and freshening system, for example. For use in stain 30 removal from textiles, the invention provides a roll of absorbent pads as shown in Figure 1. The stain removing roll of absorbent material 1 is illustrated in an expanded form in Figure 2. The roll consists of a core 2 and a length of absorbent fabric 3 which is secured at one end to the core 2 and rolled on to the core as illustrated in Figure 1. The length of absorbent fabric 3 is perforated at intervals of length into individually removable pads 4 by perforations 5.

The absorbent fabric 3 may be a non-woven fabric such as polyester fabric. In the preferred embodiment is used a 100% non-woven polyester fabric (style no. 8100) manufactured by DuPont Non-Wovens. The core 2 may be of any material, but is desirably a polymeric material; and especially preferred as the core 2 is a section of CPVC pipe. The core 2 may have 5 end pieces, which include means for rotatably mounting the core 2 to the support means 8; such means may include a simple hole in an end piece which roughly corresponds to the size of the support means 8 and permits the rotation of the core 2 on said support means 8, or may be a bearing or other conventional fitting which permits the rotation of the core 2 affixed to the support means 8, as well as other means known to the art but not elucidated here. The length of the core 2 10 may be about 4 inches. A longer length of absorbent fabric 3 may be secured at an end thereof to the core 2 by any suitable means, such as by a thermoplastic glue administered from a glue gun, for example. The method of securing the length of absorbent fabric to the core employing hot glue is sufficient to withstand the force when the perforated lengths of absorbent fabric are pulled apart. The perforations may be about 1/8 of an inch along the width of the length of absorbent 15 fabric. The width of the longer length of absorbent fabric 3 is generally that of the length of the core 2, which is about 4 inches in the preferred embodiment. The perforations 5 are at intervals of length of about 2 inches in the preferred embodiment.

A stain removing kit is packaged to include a roll 1 of absorbent pads 4 as illustrated in Figure 1 and a quantity of cleaning composition, especially a spot cleaning composition which 20 may be contained in a bottle such as a spray or pump bottle as illustrated in Figure 3. The cleaning composition is employed to treat the stain and the roll of absorbent pads is used to absorb the stain from the garment. The perforated roll of absorbent pads permits the customer to customize the size of the absorbent pad depending on the size of the stain. The customer does not have to tear off each absorbent pad 4 but may leave two or more pads attached to each other in 25 order to treat a large stain.

In operation, the customer tears an absorbent pad of a size larger than the stain to be removed from the roll of absorbent pads 1. The absorbent pad 4 is positioned on a flat surface. A cleaning composition, especially a spot cleaning composition, is directly applied to the stain to be removed. The stain on a garment is desirably positioned face down and in contact with the 30 absorbent pad 4 and pressure is applied by the customer to the back of the garment over the stain so that the absorbent pad 4 absorbs the soil of the stain and any excess cleaning composition. These steps are repeated until the stain is fully removed. The steps may be repeated to treat the reverse side of the garment to remove the stain on both sides of the garment. This method may be

used alone or as a pre-treatment before another cleaning or freshening procedure such as conventional home laundry, or home dry cleaning and freshening.

The roll of absorbent pads illustrated in Figure 1 may be employed in a stain removing implement as illustrated in Figure 4. Figure 4 illustrates a first embodiment of the stain removing 5 implement wherein the stain removing roll of absorbing material is rotatably supported at both ends 6 and 7 by prong-like support means 8 secured to handle 9. The core 2 is illustrated with end pieces. As indicated before, the end pieces include means for rotatably supporting the core 2 upon the support means 8, whereby the roll of absorbent material 1 is permitted to rotate about the axis of the roll. Such means may be a suitably dimensioned hole in the end piece, or a bearing or other 10 conventional rotatable means which supplies this function to the core 2 and support means 8. Perforations 5 at intervals of length along the length of absorbent material permit lengths of absorbent material to be removed as removable sheets or pads 4. The roll can be rolled over a garment during stain removal and when a top sheet becomes soiled, it may be torn away to expose the next lower most unused sheet.

15 The prong like support means 8 are flexible so that the prongs may be separated, the roll removed and a new roll secured between the prongs 8. Thus, the stain removing rolls of absorbent material 1 are replaceable.

20 The length of absorbent material that is secured to the core 2 may have a weak adhesive on the underside 12 to secure the top most sheets to the lower sheets in the roll so that the length of absorbent material does not unroll during the stain removal process of rolling the stain removing implement over a garment. The adhesive is not a strong adhesive and when a top sheet is soiled the top sheet may be torn away from the next lower most unused sheets. The soiled top sheet is torn away along the perforations 5 so that the next lower most unused sheet may be used 25 for the next stain removal procedure.

Figure 5 illustrates a second embodiment of the stain removing implement of the invention wherein the stain removing roll of absorbent material 1 is secured at one end 10 to a handle 11. The core 2 is illustrated with an end piece, which may include rotatable means to permit the rotation of the core 2; such means may be a suitably dimensioned hole in the end piece, or a bearing or other conventional rotatable means which supplies this function to the core 30 2 and support means 8. The roll is rotatably supported and can be rolled over a garment during stain removal. With the exception of the manner in which the roll is secured to the handle, the stain removing implement illustrated in Figure 5 is similar in other respects to the stain removing implement illustrated in Figure 4. For example, the absorbent material is perforated at lengths into removal sheets or pads 4. When the top most sheet is soiled it may be torn away to expose

the next lower most unused sheet. A weak adhesive may be applied to the underside 12 of the sheets 4 to prevent the length of absorbent material from unrolling from the roll 1 when the roll is rolled over a garment during stain removal. The roll 1 is permitted to rotate about the axis of the roll. The support means 13 for securing the handle 11 to the roll 1 permits rotation of the roll 1 and additionally permits the roll to be removed and replaced with a new roll when the roll is used up.

5 The stain removing implements of Figures 4 and 5 may be used in a stain removing kit. A quantity of cleaning composition contained within a pump or spray bottle as illustrated in Figure 3 is packaged with the stain removing implement.

10 In operation, a cleaning composition is applied to a stained area of a garment to dissolve and mobilize soil. The stain removing implement is rolled over the localized area of the stain area to absorb the soil and any remaining cleaning composition. When the top sheet of absorbent material is soiled during stain removal, it is torn off to expose the next lower most unused sheet. These steps may be performed as a pre-treatment before cleaning or freshening or along. The 15 steps may be repeated until the stain is fully removed and the steps may be repeated to treat the reverse side of the garment to remove the stain on both sides of the garment. Following pre-treatment, the garment may be cleaned in conventional home laundry or in a home dry cleaning and freshening system.

20 Known spot cleaning compositions, as well as other known cleaning compositions, especially those which are described in the art as being useful for the dry cleaning of garments or textiles may be used with the stain removing implement being taught herein. The spot cleaning composition may include a fragrance composition. The fragrance composition imparts a fresh odor to the garment and avoids a chemical cleaning smell. The spot cleaning composition may include a surfactant which is a fabric softener to improve the feel of the fabric of the garment after 25 treatment by the cleaning composition so that fibres seem plump and revived. The spot cleaning composition is preferably a liquid to avoid residue left by gelling agents and dry agents, to avoid the need for a finishing cycle to remove a dry cleaning agent, to avoid the need to trap and clean a dry cleaning agent from a dryer, and to avoid the need for high temperatures.

30 The cleaning composition and fragrance composition should be such that there is no skin and eye irritation and preferably, no toxicity. Preferably a sufficient quantity of cleaning composition is provided to clean garments with the entire roll of absorbent material.

The cleaning composition may include a fragrance, deodorant, preservative, insect repellent such as cedar oil, a coloring agent, finishing agent, fumigant, lubricants and fungicides, as long as the additives do not interfere with the operation of the composition.

Different solvents may be used for different types of stains depending on their source, age and size and for different types of fabrics depending on the blend, age and color of the fabric.

The spot cleaning composition may also be a dry cleaning solution which is not primarily directed and/or formulated for use in the localized or spot cleaning of garments.

5 Particularly useful as a cleaning composition which finds use with the stain removing implement of the invention is one which comprises the following constituents: 0.01 - 5%wt. (preferably 0.01 - 2.5%wt.) nonionic surfactant which is preferably an alkoxylated primary or secondary alcohol and/or an alkoxylated phenol; 0.01 - 2.5%wt. anionic surfactant selected from alkyl sulfosuccinates, alkyl ether sulfosuccinates, alkylamide sulfosuccinates, alkyl sulfosuccinamates, as well as salt forms thereof; 0 - 1%wt. (preferably 0 - 0.1%wt.) of one or more fluorosurfactant constituents; 0.01 - 7%wt. organic solvent selected from alcohols and glycol ethers especially water miscible alcohols and ethers, to 100% wt. of water, and further up to about 2% wt. (preferably 0 - 1%wt.) of one or more optional constituents such as acids, bases, pH buffers, coloring agents, fragrances and the like. Desirably, these cleaning compositions are 10 aqueous in nature and comprise about 90%wt. and more of water. Such a composition is one which is not primarily directed and/or formulated for use in the localized or spot cleaning of 15 garments.

Further particularly useful as a cleaning composition which finds use with the stain removing implement of the invention is one which comprises the following constituents: 0.1 - 20 10%wt. nonionic alkoxylated alcohol; 0.1 - 10%wt. nonionic alkoxylated mono- and di-alkanol amide; 0.1 - 3.5%wt. anionic surfactant especially one or more selected from alkyl sulfosuccinates, alkyl ether sulfosuccinates, alkylamide sulfosuccinates, alkyl sulfosuccinamates, as well as salt forms thereof; 0 - 1%wt. flurosurfactant; 0.01 - 7%wt. alcohol solvent especially water miscible alcohols; 0.01 - 30%wt. glycol ether solvent, especially water miscible glycol 25 ethers; to 100%wt. water. Optionally, this cleaning compositions may include up to about 2%wt. of one or more conventional additives such as acids, bases, pH buffers, coloring agents, fragrances and the like. Desirably, this spot cleaning compositions comprise at least about 70%wt. water. This cleaning composition is one which is primarily directed and/or formulated for use in the localized or spot cleaning of garments.

30 The garments which can be cleaned may include clothing, linens, draperies, rugs, upholstery covers, and the like. The soiled garments may be stale-smelling due to odors such as tobacco smoke, residue, perfume, and perspiration. Additionally, the soiled garments may have visible spots and stains. Soil and lint particles are removed.

Although the invention has been described with reference to the preferred embodiments, it will be apparent to one skilled in the art that variations and modifications are contemplated within the spirit and scope of the invention. The drawings and the description of the preferred embodiments are made by way of example rather than to limit the scope of the invention and it is
5 intended to cover within the spirit and scope of the invention all such changes and modifications.

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Claims:

1. A stain removing implement comprising;
a roll of absorbent material; and
5 support means including a handle, and rotatable support means for supporting the roll of absorbent material.
2. The stain removing implement according to claim 1, wherein said absorbent material includes perforations along its length dividing the roll into intervals of individual sheets.
10
3. The stain removing implement according to claim 1 or 2, wherein the support means releasably supports the roll of absorbent material.
4. A stain removing kit comprising;
15 a container which includes a quantity of cleaning composition; and,
a stain removing implement according to any of claims 1 to 3.
5. A stain removing kit according to claim 4 wherein the cleaning composition is one which comprises:
20 0.01 - 5%wt. (preferably 0.01 - 2.5%wt.) of an alkoxyolated primary or secondary alcohol and/or an alkoxyolated phenol;
0.01 - 2.5%wt. anionic surfactant selected from alkyl sulfosuccinates, alkyl ether sulfosuccinates, alkylamide sulfosuccinates, alkyl sulfosuccinamates, as well as salt forms thereof;
25 0 - 1%wt. (preferably 0 - 0.1%wt.) fluorosurfactant constituent;
0.01 - 7%wt. organic solvent selected from alcohols and glycol ethers especially water miscible alcohols and ethers,
to 100% wt. of water, and
further up to about 2% wt. (preferably 0 - 1%wt.) of one or more optional constituents.
30
6. The stain removing kit according to claim 5 wherein the cleaning composition comprises at least 90%wt. of water.

7. A stain removing kit according to claim 4 wherein the cleaning composition is one which comprises:
- 0.1 - 10%wt. nonionic alkoxylated alcohol;
- 0.1 - 10%wt. nonionic alkoxylated mono- and di-alkanol amide;
- 5 0.1 - 3.5%wt. anionic surfactant selected from alkyl sulfosuccinates, alkyl ether sulfosuccinates, alkylamide sulfosuccinates, alkyl sulfosuccinamates, as well as salt forms thereof;
- 0 - 1%wt. flurosurfactant;
- 10 0.01 - 7%wt. water miscible alcohol solvent;
- 0.01 - 30%wt. water miscible glycol ether solvent;
- to 100%wt. water; and
- 0 - 2%wt. of one or more conventional additives such as acids, bases, pH buffers, coloring agents, fragrances and the like.
- 15 8. The stain removing kit according to claim 7 wherein the cleaning composition comprises at least 70%wt. of water
9. A method of stain removal comprising the steps of:
- 20 applying a cleaning composition to a stained area of a garment to dissolve and mobilize soil;
- rolling a stain removing implement over the stained area to absorb the soil and remaining cleaning composition;
- said stain removing implement comprising:
- 25 a roll of absorbent material; and
- means rotatably supporting said roll so that the roll can be rolled over a garment during stain removal, said supporting means including a handle.
10. A method of stain removal according to claim 9, further comprising tearing off a top sheet of absorbent material soiled during stain removal to expose the next lower most unused sheet.



Patent
Office

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Application No: GB 9612892.1
Claims searched: 1-10

Examiner: Tony Mitchell
Date of search: 20 August 1996

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.O): A4F

Int Cl (Ed.6): A47L 13/16, 25/08

Other: On-line: WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 421772 (HUNTER) see figures 1 and 2.	1,2
X	EP 0029401 A1 (POLLET) see figure 1.	1

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| <input checked="" type="checkbox"/> X Document indicating lack of novelty or inventive step | A Document indicating technological background and/or state of the art. |
| <input checked="" type="checkbox"/> Y Document indicating lack of inventive step if combined with one or more other documents of same category. | P Document published on or after the declared priority date but before the filing date of this invention. |
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